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New Products of the Trees

LUTHER BURBANK'S
LATE INTRODUCTIONS



FOR SALE BY

Fancher Creek Nurseries

FRESNO, CALIFORNIA, U. S. A.

*All half-tone illustrations in this book, excepting portraits, are
from photographs made at Mr. Burbank's grounds.
The pictures in color are from water
colors made from life.*

PRINTED BY THE KRUCKEBERG PRESS
CATALOGUE MAKERS AND TRI-COLOR PRINTERS
LOS ANGELES, U. S. A.





FRUIT AND
FOLIAGE OF
VESUVIUS
PLUM

One-half natural size.

By A. Lunger.

New Products of the Trees

THIRD EDITION

a Treatise on
Luther Burbank's Late Introductions

**1908 - 1909 : THE FORMOSA,
GAVIOTA AND VESUVIUS PLUM**

**1907 - 1908 : THE PARADOX
AND ROYAL BLACK WALNUT,
THE SANTA ROSA PLUM
AND THE RUTLAND PLUMCOT**

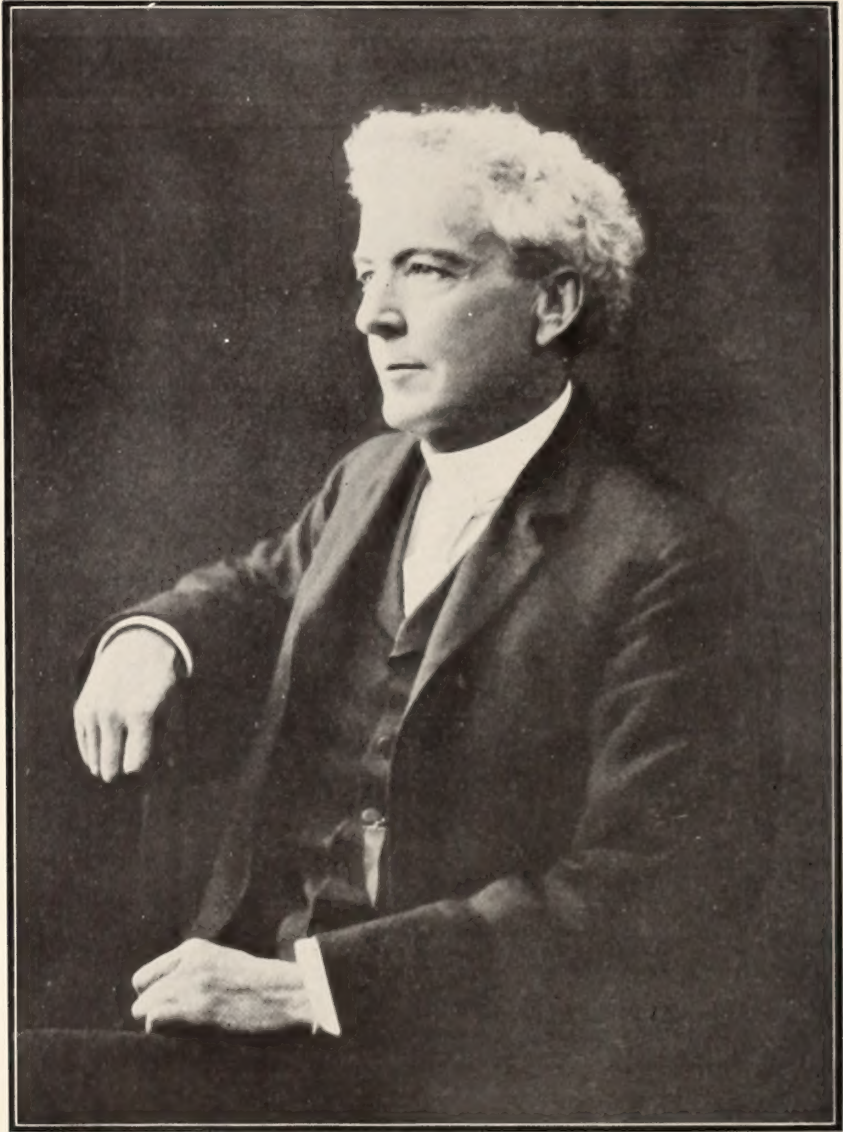
"Jock, when ye hae naething else to do, ye may be aye sticking
in a tree; it will be growing, Jock, when ye 're sleeping."

Sir Walter Scott, in The Heart of Midlothian

Commercial Propagators and Distributors

The Fancher Creek Nurseries

GEO. C. ROEDING, President and Manager
Fresno, Fresno County, California, U. S. A



"Yours for better products and more of them"

LUTHER BURBANK

THE REWARD OF MERIT

SO PRONOUNCED has been the success of the new fruits and trees of Luther Burbank which we introduced for the first time last season; so appreciative have been the many warm encomiums from expert pomologists, commercial growers and amateur horticulturists on the Santa Rosa Plum, the Rutland Plumcot, the Royal and Paradox Walnuts, that we feel sufficiently encouraged to give place to three new plums of surpassing merit of Mr. Burbank's creation, viz.: the Formosa, Gaviota and Vesuvius. These have, for the most part, undergone a rigid test on his experimental grounds, with the result that they have been found to possess merit of the first order, and are being offered with the firm conviction that they will prove valuable acquisitions to the fruit interests of the country as have so many of his former productions.

It is in a broad practical way, and purely on economic grounds, that Luther Burbank has spent his life in the creation and exploitation of new things in fruits, trees and flowers. By nature his is the creative faculty,—the trend of mind that conceives, creates, executes in the realm of plant life. This being true and his work becoming so vast, it is not at all surprising that he should leave to others the work of "bringing out" his creations to the trade. Appreciating this his friends have long contended that he should be relieved of this phase of the business, so as to afford wider scope for his scientific and experimental work.

In this connection, the Fancher Creek Nurseries were approached with a view to introducing the Burbank creations to the trade. Accordingly an arrangement covering a series of years has been entered into between Mr. Burbank and this establishment whereby we become the commercial propagators and distributors of new plants and fruits known to possess real values of the first rank that he may put out from now on. We say "values of the first order" advisedly, for we have too high a regard for the horticultural interests to place anything on the market of a meretricious character; an opinion that Mr. Burbank not only endorses, but insists must be carried out to the letter. Hence our descriptions will always be found conservative and to the point; the conditions of climate, and soils governing the habit of the new introductions will be found based on experience, lucid in expression, true to the facts, and conservative in their deductions.

With these preliminary statements, we take pleasure in issuing a second edition of this booklet describing Burbank's latest introductions, all of which possess real value to the horticulturists and plant lovers of the country, as demonstrated in the originator's grounds.

Their individual values, uses and characteristics are briefly but thoroughly described in the following pages.

FANCHER CREEK NURSERIES.

GEORGE C. ROEDING,
President and Manager.



“New and promising things should be tried”

GEORGE C. ROEDING



FRUIT AND FOLIAGE FORMOSA PLUM.

Two-thirds natural size. By A. Lunzer.

A TRIO OF NEW PLUMS

THE INTRODUCTION of a number of fruits, largely of the same character, is sure to cause more or less bewilderment on the part of the purchaser, and he is somewhat at a loss in making a choice. These latest creations of Mr. Burbank's all have merit, and have now been tested long enough so that there is no question of their ultimate commercial value. We know it is a mistake on the part of the introducer to place any new fruit on the market, unless he has abundant assurance that such fruits as he recommends will stand the test of the severest criticism when they reach the commercial grower. It is useless in these days to recommend a fruit of comparative merit, for unless the quality is actually in the fruit itself, the consumer, on whose judgment the grower must finally depend, might reject the new variety as not being equal to some of the older standards.

THE FORMOSA

Formosa is an unusually handsome fruit which runs surprisingly uniform in size, in many respects resembling the fruit of the Kelsey and Wickson, but much more uniform and handsome in appearance than either. In flavor, firmness and coloring, it surpasses the older varieties in every sense of the word. It is said by Mr. Burbank to be of a rather mixed parentage, blending probably fifteen to eighteen varieties in its origin. Ripens about a week later than Santa Rosa.

So high an authority as Prof. E. J. Wickson, author of "California Fruits and How to Grow Them," describes it as follows:

I have never seen this fruit before, and I find it large (two and one-half inches longitudinal and two and one-fourth inches cross diameters) and handsome, red, shading from rather light to deep cherry color, the coloring being more even than the original Wickson as it grows with me. The variety also seems to have a tendency to greater symmetry, the heart-shape being less pronounced and the general exterior points of the fruit striking me as superior. Comparison of flavor points could hardly be made unless one had the two varieties grown under exactly the same conditions.

In line with the above recognized authority on California pomology, Luther Burbank authenticates the opinions therein expressed:

This is a plum which has been very fully tested for the past five years in close comparison with all others, and has been pronounced the "best plum in existence" at the present time. The trees are wonderful growers (so far as known nothing comparable to Formosa is now in cultivation in this respect), with unusually large, thick, healthy, light green foliage; strong, hard, wiry wood, which is always capable of holding the great crops of fruit which the trees so far have never failed to bear. Even this year when all ordinary plums are either a partial or complete failure, Formosa is loaded with fruit of great size, unusual beauty, and unequaled in quality with perhaps the exception of the new Santa Rosa first introduced last season.

Formosa blooms with the Burbank and Abundance, and always escapes late spring frosts, and always bears profusely even when continuous rainy weather prevents full pollination in most other plums. No disease has ever found lodgment with Formosa. The fruit is of uniform size, averaging about six inches in circumference one way by eight the other. Fruit rich yellow with a palé bloom until nearly ripe, then turning to a clear rich red. Flesh pale yellow, unusually firm, sweet, rich, delicious, with a delightful apricot flavor; nearly free-stone.

Formosa has been very thoroughly tested for its keeping qualities, which are unequaled except by Santa Rosa, Wickson, Burbank, and a few others.

Soils and Climates.—Formosa, like all the pluni family, in general finds congenial conditions over wide geographical areas. In view of this, its trial culture can be confidently recommended not only in the Pacific States and Territories but throughout the Eastern United States, Europe and of course all countries enjoying a climate similar to that of California.

In habit of growth it is upright, growing with remarkable vigor, often before commencing to bear heavily, ten to twelve feet in a single season, hence the tree should be pruned quite severely when young and headed back to 18 inches from the surface of the ground. Like other trees plums are more or less subject to sun scald, which is overcome by having the branches start low down to give ample shade to the body of the tree. The first three seasons following planting, practically the same method of pruning as directed for other fruits should be adopted. After the tree has acquired its form and the main branches are sturdy and strong enough to support a crop, outside of thinning and cutting out cross limbs, no further pruning is necessary. Experienced growers have learned that the shortening process of pruning, if carried on successively each year, causes the growth of too much young wood, which, although not strictly speaking suckers, nevertheless does not produce fruit. The fruit bearing branches assume a weeping tendency, produce a large number of fruit bearing spurs, but very little new wood. These remarks refer more especially to California, and should be modified where climatic conditions are radically different, in which case the wise planter will be guided by the practice pursued by experienced plum growers in his neighborhood.

THE GAVIOTA

It is a cross of Americana and Japan, with probably half a dozen other varieties combined with it. This plum has so many points in its favor that we feel safe in recommending it as one of the very best of the latest varieties of table and shipping sorts. It is of the largest size, and Prof. E. J. Wickson, acting director of the United States Experiment Station at Berkeley, and Professor of Horticulture in the University of California, writes of it as follows:

It is a strikingly handsome fruit, mostly cherry red, very spreading and almost concealing a rich golden sub-color which, however, asserts itself near the stem end. In size it is $2\frac{1}{4}$ inches longitudinal by 2 inches cross diameter, and the size of the pit resembling in contour that of a rice kernel; also by its exceedingly small size — $\frac{7}{8}$ of an inch longitudinal by $\frac{5}{8}$ of an inch cross diameter and only $\frac{1}{8}$ of an inch in thickness. By actual weight the pit constitutes one and four-tenths per cent of the fruit.

Actually, the pit is so small in comparison with the size of the fruit that one is almost apt to exclaim, "Why, it is seedless."

Its time of ripening, as indicated by Mr. Burbank in his description of this fruit, applies to conditions at Santa Rosa. In the interior valleys, the season would undoubtedly be fully two weeks earlier. Mr. Burbank describes it as follows:



FRUIT AND FOLIAGE GAVIOTA PLUM.
Two-thirds natural size. By A. Lunzer.

Ever since the summer of 1900 this superb hybrid shipping plum has been under careful investigation on the experimental farm each season, and the trees have never failed to produce a good crop of fine large fruit. Neither the fruit or the trees have shown any disease or defect during all this test, and at the same time of this writing, July 25, 1907, are again loaded with large, beautiful fruit. While the trees do not make such a phenomenal growth as the Formosa, yet the trees are vigorous and productive. Gaviota trees are rather upright in growth until they have grown several successive crops, when the branches take a more weeping habit, but not more so than other plum trees which bear so heavily.

Gaviota, is a late bloomer, hence always escapes every emergency, producing each season a full crop even when nearly all others fail from late spring frosts or rains during the blooming period. The fruit is of a deep reddish purple when ripe. Flesh remarkably firm, honey yellow, very fragrant and sweet and of excellent quality.

One of the very best shipping plums, keeping fully as well as the always popular Wickson and Burbank and ripening up well a week or more after being picked green. Its season here is July 15 to August 5, with the Wickson, and just after Santa Rosa. This thoroughly tested variety will take its place as one of the best shipping plums.

Distribution and Soils.—The Plum being among the hardiest of the stone fruits, it is reasonable to suppose that the Gaviota will grow in a climate where zero weather prevails, requiring possibly in the colder regions some protection during the winter months. It succeeds best in a good sandy or loamy soil, with an open well drained subsoil. In planting, the ground should be well broken up by thorough plowing, and the holes dug sufficiently large to enable the roots to spread and grow. In a rich soil the growth is apt to be vigorous, requiring pruning much like our suggestions with the Formosa. Low pruning is the recognized method in California. In planting we always advise that the general system and care bestowed on the most successful plum orchards in any given locality be duly observed and followed.

THE VESUVIUS

The tree is worthy of its name, for its color is so surpassingly beautiful that while it excites admiration at a distance, closer examination only intensifies the first expression of delight which its beautiful foilage is sure to arouse. It is somewhat like *Prunus pissardi*, the old Purple-Leaved Plum, but so superior that the old purple-leaved plum will become obsolete. Its fruit is of a deep rich color, possessed of a pleasant acid flavor. It is not a very prolific bearer, hence we recommend it only as a striking foliage tree worthy of a place in every garden and park. We give Mr. Burbank's description and do not believe that we can add anything further except to say that we endorse all his statements excepting that he does not do full justice to this most beautiful foliage tree:

The *Prunus pissardi*, a crimson-leaved form of the *Prunus myrobalana* introduced twenty years ago, is the only good purple-leaved plum generally known. For the past eighteen years have been raising hybrids of this and Americana and Japan plums, hundreds of which are

superior to the original well-known pissardi in all respects; but among all known crimson-leaved trees of any kind Vesuvius stands alone. The trees are tremendous growers, taking on a peculiarly picturesque appearance; branches deep purplish crimson, leaves gigantic, (often four and one-half inches wide by six long,) but above all, these great leaves are of the most beautiful metallic crimson color throughout, both on the upper and under surface, having a crumpled surface very much like a *Coleus*. Nothing in this line can compare with Vesuvius in color. Tree a very strong grower, taking the graceful form of the American elm. Fruit nearly globular, three and one-half inches around, fair quality especially for cooking, but not an abundant producer of fruit. Any tree which produces such beautiful foliage should not be expected to produce much fruit. The growth and foliage of Vesuvius will make it the coming tree for foliage effect, beautiful in the distance, but more so on closer inspection.

Planting and Treatment.—Nothing we can say so forcibly illustrates the gorgeous coloring of this new purple-leaved variety as the fine illustration we show of it as a frontispiece. Allowing for the fact that in this picture the leaves are less than one-half their natural size, its transcendent beauty is obvious. Indeed, there is scarcely a single deciduous tree which for gorgeous coloring lends so striking a beauty to the lawn, conservatory or fruit garden.

In planting and treatment follow the usual routine with other varieties of plums, only in pruning be careful after the head is once established to prune to an upper bud, as this tends to bring out the beautiful weeping effect.

THE SANTA ROSA

No one fruit has so strongly individualized the name of Luther Burbank as the plum. Some twenty varieties, now well known and very widely grown, are the result of his creative genius, all of which have stood the test of experience with growers and in the markets of the world. As a natural result his latest, the Santa Rosa, is in every way not only a superior fruit from every point of view, but must be regarded as the best thing in the way of plums that has come from his hands. It has been under trial on his fine experimental grounds at Sebastopol for the past eight years, during which time it has never failed to produce bounteous crops of uniformly large perfect fruits of a deep purplish-crimson color averaging six inches in circumference each way. It possesses every essential to a marked degree to make it a prime favorite among growers wherever the plum luxuriates. It is a good grower, good bearer, fine shipper, good keeper, and in every way a money-maker. No plum grower can afford to neglect it, and no family orchard should be without a few trees.

At the Lewis and Clark World's Fair, held at Portland, Oregon, in 1905, the exhibit of the Santa Rosa Plum attracted wide attention on account of its beauty and great size. Its merit made so strong an appeal to the Board of Judges that it was awarded a Special Gold Medal, in competition with all other similar fruits on exhibition from this and neighboring States.

Distribution, Climates and Soils. Like most kindred plums it is safe to say that the Santa Rosa will be found suitable to a wide range of climates. As an indication of this, we have only to cite the fact that the Burbank (another



FRUIT AND FOLIAGE SANTA ROSA PLUM.

Natural size. *By A. Lunzer.*

of Mr. Burbank's discoveries) has found a congenial existence in so cold a climate as Minnesota and portions of Canada, which leads us to believe that the "Santa Rosa" is destined to win a place equally advantageous. Hence it is well worthy of trial culture wherever plums are found to grow and produce fruit. As to general treatment, that is much a matter of location, which will suggest itself by the general practice with plum trees under prevailing local conditions.

Blooming and Fruiting. The Santa Rosa plum in California is considered a medium early bloomer, and it is presumed it will maintain this characteristic quite generally wherever planted. In this state it has never failed to yield an abundant crop, though until the past two years, it is as yet but sparingly introduced.

Quality and Value of Fruit. The superb market quality of the Santa Rosa plum has never been equaled. As a shipping fruit it is the peer of them all,— "standing up" under the most trying conditions. The plums are a deep purplish crimson with a pale blue bloom, each fruit averaging six inches in circumference each way; the flesh near the skin is purple shaded with rosy scarlet and pale amber towards the stone, which is quite small; the eating quality is unequaled, rich, fragrant, delicious, surpassingly exquisite; ripens with the earliest, nearly a week before Climax and Red June, and two weeks earlier than the Burbank. The Santa Rosa has been so thoroughly tested that we feel certain that every grower who will plant and care for the trees properly, and whose soil and climate afford good plum conditions, will, if he plants this grand plum, find that we have not exaggerated its fine qualities.

Habit of Growth. The tree is a strong, vigorous, upright grower. In habit it much resembles the ever popular Wickson with even larger and more abundant foliage, thus affording ample protection to the fruit. The period after planting at which it will bear depends on prevailing conditions of soil and climate. It is Mr. Burbank's experience that in favorable situations it will yield fifty pounds of fruit when the trees are three years of age; this will of course be more or less modified by the character of the soil, climate, care and cultivation given an orchard.

Judge S. F. Lieb of San Jose, a prominent grower and a recognized authority on fruit culture, has given this plum a thorough test, and writes as follows touching on its many admirable qualities:

San Jose, Cal., October 10, 1906.

Fancher Creek Nurseries, Fresno, Cal.,

Gentlemen:—Your favor of the 29th at hand. I have had the Santa Rosa plum fruiting in an experimental way for four or five years; I have therefore tested it out very thoroughly.

Everything considered, I am of the opinion that it is by all odds the finest all around plum Mr. Burbank has yet produced, and I have kept close track of all of them. It is a fine grower, the wood is very tough and the limbs will not break. It is a sure and regular bearer and bears always most abundantly. It does not have any off years. The fruit runs remarkably fine, even in size and astonishingly smooth and clear of any defects. It is beautiful, delicious and a very fine carrier to Eastern markets. It will keep well in hot weather for a week after it is ripe, so there is no occasion to pick it half ripe in order to ship.

I intend to plant it very largely myself, and to the exclusion of all other shipping plums.

"This grand plum has been so thoroughly tested," writes Mr. Burbank, "that we offer it as above, knowing that all will be pleased with it."

THE PLUMCOT

As its name clearly indicates, this new candidate for horticultural honors, is a cross between the plum and apricot,—a feat deemed impossible of accomplishment a few years ago. That its perfection was a matter of patient labor, close study and keen observation goes without saying, but with a continuity and singleness of purpose Burbank has been successful in overcoming all obstacles thereby creating a fruit which happily partakes of the qualities of both parent stocks. In this endeavor many have been produced and amalgamated, resulting finally in what has been called "The Rutland Plumcot" in honor of an Australian admirer. Mr. Burbank does not by any means consider it a perfect fruit, but it does possess some strong points of special interest to fruit growers. For instance, though not a heavy bearer, it produces fine large fruits in liberal quantities every year where apricots fail, thus to a great extent increasing the area for that fruit.

Distribution, Soils and Climate. By reason of its parentage, the Rutland Plumcot will not only flourish in all portions of California, but it is the conviction of those who know it best, that it will do well in the sheltered portions of Arizona, Southwestern Texas, along the Gulf of Mexico, the extreme southern States and as far north as Washington and Maryland. All the stone fruits, excepting the apricot, will withstand considerable cold, and the Plumcot possessing some of the elements of the plum, its culture is feasible where the apricot would be considered hazardous. It finds congenial conditions in a well drained loamy sandy soil, and is keenly responsive to intensive culture.

Blooming and Fruiting. Though recognized as an unusually early bloomer, it nevertheless possesses characteristics insuring regular crops. The flowers appear continuously over a considerable period of time, thus enabling it to escape late spring frosts, where the apricot, under identical conditions, bringing forth its blooms all at one time, suffers a total loss of its crop. This of itself is an important feature in its favor, especially in localities subject to spring frosts.

Character and Value of its Fruit. Obviously the amalgamation of the apricot and the plum must produce a fruit unique in character, hence its economic value is a matter still largely to be determined by its development and the exploitation of its uses. One of the striking features of the Rutland Plumcot is its brilliant red flesh possessed of a strong sub-acid flavor rendering it a favorite for cooking, jellies and jams. When fully ripe, it is a fair dessert fruit, possessing a pleasant apricot-plum flavor. Fruit about the size of an ordinary apricot with a deep purple velvety skin.

Habit of Growth. The tree is in every sense an object of beauty, growing much like a weeping willow with long pendulous branches which bend gracefully over. Foliage small, somewhat thin, resembling rather more that of the plum than that of the apricot.

The demand for this fruit has been so urgent that Mr. Burbank has consented to send it out in the face of the fact that he does not think he has developed it to its highest possibilities. Its many fine qualities coupled with its possibilities merit at least trial culture by the advanced horticulturists of the country.



THE RUTLAND PLUMCOT.

Natural size. *By A. Lunzer.*

A LUMBER, FUEL AND SHADE TREE

RAPID GROWING. FINE SHAPE. DENSE WOOD.

THE NEW HYBRID WALNUT, THE PARADOX

Juglans Californica × *Juglans Regia*.

THERE is a demand everywhere for a rapid growing deciduous tree for fuel and lumber purposes, street and avenue planting, and wherever immediate tree growth is demanded. The Blue Gum (*Eucalyptus globulus*) among evergreen trees will always hold its own; but where a deciduous tree is desired this new hybrid walnut is destined to occupy the very first place. In rapidity of growth it is suggestive of such quick-growing trees as the Blue Gum, far outdistancing all other nut trees in rapidity of growth, size of foliage and beauty of form. Budded trees six years of age under the same conditions are fully twice as large, broad and tall as Black Walnut trees at ten, or Persian walnut trees at fifteen years of age. Twelve to sixteen feet growth in the nursery rows the first years is not unusual: thus the hybrid grows twice as fast as the combined growth of both its parents. The leaves, which are from two feet to a full yard in length, are clean cut, glossy, bright green, have a surpassing sweet odor resembling that of fragrant apples and as powerful and peculiar as that of roses and lilies.

The bark is thin, smooth, light gray with marblings of white; the wood is very compact, with lustrous silky grain, taking a beautiful polish, and as the annual layers of growth are an inch or more in thickness and the medullary rays prominent the effect is unique. This hybrid originated in 1888 from a cross made the year before; like many true hybrids, though blossoming freely every season, it seldom bears nuts but is readily budded or grafted on thrifty young Black Walnut stock. As an ornamental tree it is peerless and for wood and lumber possesses merit wholly out of the ordinary. In shape and habit of growth it is very pleasing to the eye, rendering it especially desirable for ornamental purposes. In planting the Paradox Walnut the beauty of the landscape is enhanced during the winter by its absence of foliage and likewise in summer affording a comforting protection from the hot sun by its presence. Its nuts possess little commercial value and are rarely produced even on old trees.

QUICK-GROWING STREET AND AVENUE TREE

The illustrations of this new walnut are views of the trees from which our measurements have been made. These trees are growing on the street corner of Mr. Burbank's historical home. His commodious new house was almost completed when the view was taken of the tree in foliage and is seen directly across the street. For avenue purposes few if any trees are superior to this exceedingly rapid

growing walnut. The writer has seen trees of the California Black Walnut and Paradox five years old, planted in orchard form, and the Paradox was fully ten inches in diameter, while the California Black, taking the very best tree for comparison, did not measure over seven inches. Leaving out its value, which is unquestioned for timber, avenue and street planting, the fact that it is such a remarkably strong grower makes it additionally valuable to serve as a stock for grafting. Another point, which should be borne in mind is that the French and



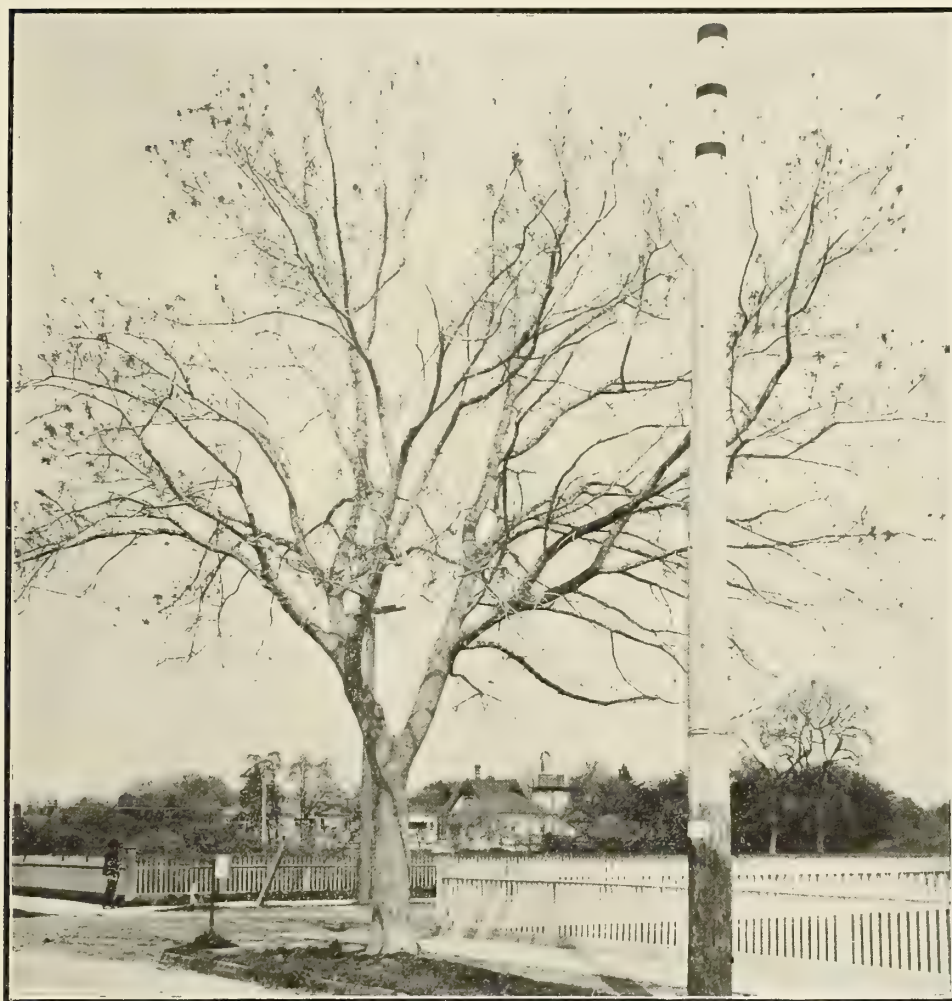
The Paradox Walnut Tree in foliage.

Sixteen years old; planted on hard side walk; never irrigated; height, 60 feet; spread of limbs, 75 feet; trunk, 3 feet from the ground, 26 inches in diameter

English walnuts have a greater affinity for this stock than they have for the California Black Walnut. The Paradox takes very readily on the California Black Walnut root, even more so than the Royal, and makes almost twice the growth in the nursery rows. In grafting Paradox in nursery rows on California Black Walnut, no difficulty is experienced in securing a seventy-five per cent stand.

Adaptability. The French Walnuts find congenial conditions at Interlaken, Switzerland, at the base of the Jungfrau in the Swiss Alps, where it is

intensely cold in the winter months. The writer has seen these trees, and they are hundreds of years old and are in the thriftiest condition. It is of historical interest to record that during the Revolutionary war George Washington camped in an English walnut grove situated within what is now a portion of Greater New York City. This historical grove bore nuts during its existence, which only



The Paradox Walnut Tree dormant.

ended some twenty years ago, when the land was required for building purposes; clearly indicating its wide and diverse geographical distribution and its capability of luxuriating in a cold climate. Indeed, the common English and so-called French walnuts (which are practically alike) will thrive fairly well in Central New England, suffering from damage by biting cold only in the destruction of the tips of the branches. Large trees are found here and there which produce a few nuts occasionally. The very fact that the

English Walnut is hardy in Interlaken is sufficient evidence that the Paradox, which is a cross between the English and the hardy California Black, will find conditions throughout the eastern and western states, where there are great extremes of cold in the winter months, congenial to its growth and development. Late observations clearly go to prove that the Paradox will stand frost much better than was at first supposed. Advices based on actual experiments go to show that it will grow well over the Pacific Coast States and Territories, throughout the Southwest, and the Gulf and Atlantic Southern States as far north as Pennsylvania, and possibly throughout most of the northern States.

Planting. Do not fail to dig the hole in which the tree is to be set, at least two feet in diameter and two and one-half feet deep, and loosen up the soil as deeply as possible in the bottom of the hole. When the tree is set, the collar should not be more than two inches below the surface of the ground. The planter should always bear in mind that the soil must always be well packed around the roots at the time of planting.

Winter Protection. In every cold climate, for at least two years after the trees are planted, they should be wrapped with corn stalks. Rye straw would answer if corn stalks are not available.

Nuts. For some unexplainable reason this variety never produces many nuts and those that are produced are retained by Mr. Burbank for planting with a view, by selection, of still further improving this tree.

Timber. The wood of the Paradox Walnut is in every respect the equal of the celebrated Cashmere Walnut lumber now so extensively used for picture framing. It works up smoother and has a finer compact grain than the ordinary Black Walnut. As the tree grows several times faster, often averaging $1\frac{1}{2}$ inches in diameter annually on good soil in California, it certainly possesses unusual attractions to the timber grower. Its parent, the common English Walnut, on cultivated ground at Santa Rosa, California, at thirty-three years of age, showed a total growth of nine to twelve inches in diameter, while at only sixteen years of age the Paradox on a dry, hard sidewalk is over two feet in diameter at four feet from the ground. It is well to bear in mind that walnut trees require a year or two to make a strong tap root and become well established.

In view of these facts, it is pertinent to ask, what will be the size of Paradox trees when thirty-three years of age? Will they not be four times as great in diameter at the ordinary Black Walnut at the same age? At Santa Rosa, San Jose, Campbell and other California points, where both varieties are growing side by side, these facts are now self-evident. Touching the high quality of the lumber cut from Paradox logs, the accompanying illustrations tell their own story. Note the compact grain of the wood, the fine gradations of light and dark shadings so essential and pleasing in interior finishing and cabinet work. When to these is coupled unusual strength, durability and other good qualities, we certainly have an ideal high-grade lumber.



Foliage of Royal Hybrid

Foliage of the Paradox Walnut

OFFICIAL RECOGNITION OF THE PARADOX

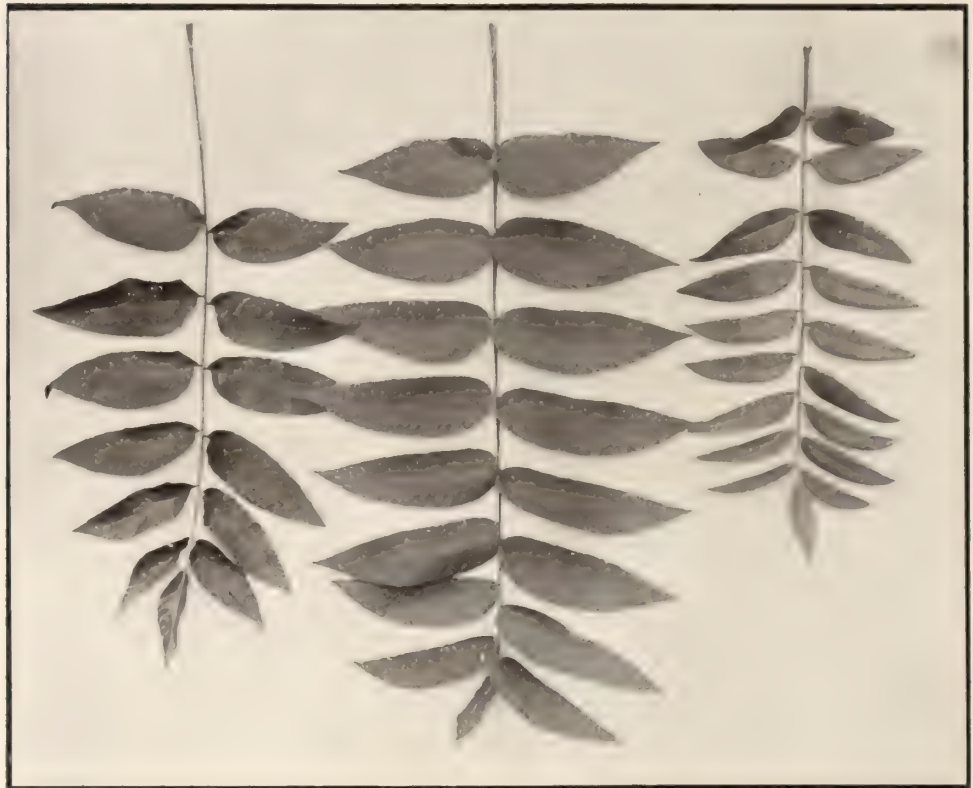
In 1877 Luther Burbank crossed *Juglans regia* with pistillate flowers of *J. Californica*. Resultant nuts were planted in 1878, and in ten years the tree from one made the remarkable growth of twelve inches in diameter at two feet from the ground. It was then accidentally destroyed. Buds that had previously been secured and set on other stocks show the same luxuriant growth of wood and foliage. Trees of these, four years from bud, transplanted to a hard sidewalk, were in 1891 said to be as large as California trees ten years of age; the leaves have a very strong, delightful fragrance of new apples, unlike any other tree. The bark is light colored, thin, and very smooth. Specimen leaves nearly a yard in length, and a photograph of the budded tree, sent to the Division of Pomology in 1892, indicate that the tree is a shapely, symmetrical grower that furnishes abundant shade. Mr. Burbank says: "No other tree that I have seen, except Eucalyptus, will equal this in growth." This tree has not yet fruited. He has some crosses of *J. nigra* and *J. Californica*, of which one is six years old and exceedingly handsome.—[U. S. Department of Agriculture, 1896.

THE LUMBER TREE OF THE FUTURE

THE NEW HYBRID

THE ROYAL BLACK WALNUT

Juglans nigra × *Juglans Californica*.



Eastern Black

Royal Hybrid

Cal. Native Black

OF all the forest trees adapted to the making of high-grade lumber in this country, not one possesses a greater commercial value than the Black Walnut (*Juglans nigra*), nor is there another tree which has so ruthlessly been cut away from the landscape of its native habitat. The rich forests of the upper Mississippi Valley are practically exhausted, with the result that its lumber now possesses the highest value in the American markets. Indeed, its value makes it prohibitive to a large extent for the purposes to which it was originally used in the manufacture of furniture and interior house finishing. The result is that it is now extensively used as a veneer face to other and cheaper woods. The old tree is a slow grower, which fact has somewhat retarded reforestation and planting for purposes of lumber.



FINISHED LUMBER OF THE PARADOX WALNUT.



FINISHED LUMBER OF THE ROYAL BLACK WALNUT.

These considerations have become more pronounced as the native trees have become exhausted, and the feasibility of growing the Black Walnut for timber purposes has often been urged on land owners and foresters. The principal obstacle has been the rather slow growth of the tree, it requiring something more than twenty years to produce sawable logs. These conditions excited the mind of Mr. Burbank to the feasibility of hybridizing the Black Walnut (*Juglans nigra*) of the Mississippi valley with the California variety (*J. Californica*) with the hope that the hybrid would produce a wood of fine quality and a tree which for rapidity of growth would produce merchantable timber in half the time required by the Black Walnut,—a feat possible only by the patience, care, minute observation and “know how” of a Burbank. Hybridization among the black walnuts is impossible in the wild state. The Royal is the first case on record of its having been accomplished artificially.

It is the first hybrid of this kind ever brought to the attention of botanists and horticulturists. The original tree was produced in 1878 by crossing the American Black Walnut (*Juglans nigra*) and the California black walnut (*J. Californica*). The first year of its existence it outgrew all other trees in its vicinity and at the end of the first season was fully four times as large as the most rapid growers of its kind. All the trees grafted from it have maintained this phenomenal development, holding its own with any other tree which can be grown in temperate climates. Unlike many hybrids these trees produce large nuts in the utmost profusion at an early age even while making such a wonderful growth. The nuts are larger and of much better quality than ordinary black walnuts which are not generally esteemed for food purposes. The great value of this new creation is for lumber and fuel and incidentally as a shade and ornamental tree of great beauty and grand proportions. It has proven to be hardy wherever the common Black Walnut thrives. Practical lumbermen were at first in doubt if such a rapid growing tree could produce dark, hard, close grained wood of a silky fibre which would take a fine polish, but on trial the wood has been found to have all the best qualities of the ordinary black walnut lumber in perfection. The wood is exceedingly hard, close grained, takes a silky polish and is even superior to ordinary black walnut lumber, more nearly resembling the tropical mahogany.

The Royal makes such an unequalled growth that it will be best to plant the trees for timber growing about fifteen feet apart each way and when six to ten years of age half of the trees should be removed to give the remainder room. Cultivation during the first few years is of great advantage. Any ordinary crop can be grown among the trees until they claim the whole space.

Soil. The Royal as well as the Paradox will be found adapted to almost any good average soil, providing there is not a stratum of rock or hardpan close to the surface; and if proper care is taken to blast out the hard pan before planting, even such soil will develop strong, thrifty trees. As might naturally be inferred, a deep, alluvial soil, moderately moist, will produce larger, finer and thriftier trees in a shorter time than a soil not possessing these qualifications.



The Royal Black Walnut in Foliage.

Sixteen years old; height, 100 feet; spread of limbs, 54 feet; trunk, 3 feet from the ground, 3 feet in diameter.

Seedlings versus Grafted Trees. The Royal Walnut was selected from thousands of seedlings raised by Mr. Burbank as the thriftiest tree in the lot at the time he was experimenting in the development of a rapid-growing tree for timber purposes. The very fact that the scions from which our trees are grown, were



The Royal Black Walnut dormant

cut from this magnificent specimen, gives the purchasers the assurance that they are receiving trees true to the original type. Those purchasing seedlings must bear in mind that they may or may not equal the parent tree in rapidity of growth and habit. This is a chance taken by the purchaser. On the other hand with grafted trees, we can guarantee the trees we sell to be identical to the original tree.

Nuts and Method of Planting. We will be pleased to supply nuts as long as our supply lasts. In countries with climatic conditions similar to those of California, they can be stratified by burying them in damp sand or a loose alluvial soil about four inches deep. The nuts should remain in the bed until they show signs of sprouting, when they should at once be planted in nursery form, for one or two seasons, or still better, in their permanent location. If planted in nursery rows, the nuts should not be set closer than eight inches and not deeper than two inches below the surface of the soil. One objection to planting in orchard form is the possibility of disturbing the nuts when cultivating the ground, and also that all of the nuts may not grow, which means the unnecessary cultivation of a large amount of ground. It has been demonstrated time and again that transplanted trees grow fully as rapidly as those raised from the nuts and which have not been disturbed. In planting, the protruding radicle, which is the first evidence of growth, should be pointed downward. In cold climates where the ground becomes frozen in the winter months, stratify in a box of sand or light alluvial or sandy soil, which should be moderately damp. Place the box in a cellar or pit. Should there be any danger of attacks by ants, a liberal amount of wood ashes mixed with the soil will repel them. Do not commence stratifying in cold climates earlier than the middle of February unless they are allowed to remain out of doors. Nuts received too late in the spring to permit their being stratified, should be soaked in clear cold water for five or six days, changing the water every day, and then planted out.

From Mr. Harwood's recent book on "New Creations in Plant Life" we take the following paragraphs voicing the opinions of lumbermen and woodworkers:

The new wood is as hard as the old-fashioned black walnut, somewhat harder when fully seasoned.

It has a finer grain than the old walnut and takes a higher polish.

It is nearer the mahogany grades than any other walnut and remarkably like some of the tropic mahoganies.

Its possibilities when quartered or when sawn for other novel effects in veneers, are large.

The width of the annual growth makes it peculiarly suitable when sawn in long strips for wainscoting and like effects.

While the fibre of the wood is hard, it is fine for working as well as for polishing.

Under ordinary good conditions saw logs can be expected at from eight to twelve years of age from planting. Like most of its family it makes a rather slow growth the first year after transplanting but when once established, its growth is rapid, firm, and a delight to the planter. By nature it prefers a deep alluvial soil, well drained. Indeed, the Royal will grow along side of and under the same conditions with the American Black Walnut of the Eastern and Middle Western States. It will withstand the same degree of frost and cold. It is as hardy as the oaks.

GOLDEN OPINIONS FROM EXPERTS.

TWO GOOD PLUMS.

San Francisco, Cal., September 7, 1908.

Mr. George C. Roeding, Fresno, Cal.

Dear Sir: In regard to "Fermosa", I have fruited it on my place at Menlo Park for the past four years. I have also all of Mr. Burbank's principal varieties offered by the Nurseries there, and "Fermosa" I consider the most attractive of all of them for family use. Its rich red cherry color, uniformly large size, and unusually rich delicious flavor, make it the ideal plum. It has been more admired by friends who have tasted it than any plum growing on my place. The "Santa Rosa" I have growing, but as it has not yet fruited, I am able to speak of it only as I tasted it at Mr. Burbank's experimental grounds at Sebastopol. The deep purple-crimson color of this plum I think hardly so beautiful as that of "Fermosa," though doubtless this darker color makes it more desirable to the trade. Undoubtedly no plum can be compared to this variety for shipping to Eastern markets, for, in addition to its firm flesh, and very large size, it is surpassingly delicious in rich juice and exquisite flavor. After tasting this variety at Mr. Burbank's place every summer for the past four years, I have uniformly concluded it contains so many good qualities that nothing will probably surpass it in the plum line. Having appreciated both of these varieties for several years past I was much pleased when I learned you had arranged for offering them to the public, and I think great satisfaction and much pleasure will result from their sale.

Yours very truly,

J. LEROY NICKEL,
of Miller & Lux.

A FINE CANNING VARIETY.

[From The National Nurseryman, August, 1908.]

The office of the National Nurseryman is in receipt of a box containing samples of Burbank's Santa Rosa plum, forwarded by the Fancher Creek Nurseries, Fresno. This plum is of the largest size of its class. It is dark purplish-red in color, firm and meaty in flesh, with a moderate-sized stone which is adherent. The skin is tough, indicating good shipping qualities; the flavor is a curious mingling of Japanese and Prunus simoni qualities. There is, however, a good deal of acidity associated with the skin. We are of the opinion that it will prove a fine canning variety. The following is a more technical description of the specimens received:

Form, regularly round with truncate ends; size, large, two by one and seven-eighths inches; cavity, deep, narrow, flattened laterally; stem, one-half inch, slender; suture, well defined by a ridge, depression slight; apex, roundish, sometimes depressed; skin, smooth, tough, acid to astringency; color, dull red with purplish tinge; dots, scattering, small, gray; bloom, none; juice, abundant colored; flesh, firm but melting, highly colored; stone, med. size, flat winged, cling with Americana characteristics; flavor, mild with peculiar prune flavor; quality, fair to medium; use, cooking. This is a handsome fruit and appears to combine Japanese, Americana and Simoni characteristics. Keeps well.

LARGE, SHOWY, HANDSOME AND GOOD QUALITY.

Rochester, N. Y., July 24, 1908.

Mr. George C. Roeding, Fresno, Cal.

Dear Sir: The samples of Burbank's new plums sent on the 18th were delivered here today the 24th, in good condition. The three varieties: Santa Rosa, Gaviota and Formosa, are large showy, handsome and of good quality. They seem to be very promising.

Thanking you for the opportunity afforded to test them, I am,

Yours truly,

W. C. BARRY,
Of Ellwanger & Barry, Nurserymen.

OF WONDERFUL QUALITY.

Tucson, Arizona, July 12, 1908.

Fancher Creek Nurseries, Fresno, Cal.

Gentlemen: We received your half dozen Santa Rosa plums recently and were much interested in judging them. Although we happened to have no expert on plums present at that time, I think we are all quite unanimous in thinking them of wonderful quality. I cannot imagine a more luscious fruit of the plum tribe than this variety.

Thanking you for the opportunity to judge them, I am,

Yours very truly,

R. H. FORBES,
of the University of Arizona.

THE BEST IN THE PLUM LINE.

Glen Saint Mary, Fla., July 16, 1908.

Mr. George C. Roeding, Fancher Creek Nurseries, Fresno, Cal.

Dear Sir: We beg to acknowledge receipt of your letter of the 8th instant and by yesterday's express we received your box containing five specimens of the Santa Rosa plum. One of the specimens was over-ripe and soft, the others were in excellent condition. Even a plum which had the skin broken before packing was perfectly sound. It is a very beautiful fruit and by a long odds the most handsome plum we have ever seen. Mr. Burbank is to be complimented upon this remarkable production and we have every reason to believe that it is the best variety in the plum line that has yet been brought forward. Are you handling this variety for the trade?

Thanking you for sending us the plums, with kind regards, we remain,

Sincerely yours,

GLEN SAINT MARY NURSERIES CO.

EXCEEDS ANYTHING OF THE KIND EVER SEEN.

Des Moines, Iowa, July 24, 1908.

Mr. George C. Roeding, President and Manager, Fresno, California.

My Dear Sir: Your esteemed favor of the 18th inst., advising that you had on that date expressed to me samples of Burbank's new plums, was received on the 22nd.

Replying would state that the plums referred to were delivered at our office at 10 a. m. on the 23rd, and found to be firm and in excellent condition with but one exception. One of the Santa Rosa specimens was slightly decayed on one side.

Both specimens of the Formosa and Gaviota were in perfect condition, and if they were equally ripe with the Santa Rosa when shipped, show better keeping and carrying qualities.

I thought I had learned long ago, not to be surprised by anything in the fruit line, which hailed from California; but these plums so far exceed anything of the kind ever before seen, that I am compelled to recede from this position. They were not only delicious and of exquisite flavor, but were of mammoth size, firm and a beautiful rich color.

I question very much as to the success of the plum in this locality, but feel that it will prove a very valuable acquisition to the already large assortment grown on the Pacific Coast.

J. W. HILL, President Des Moines Nursery Co.,
and President of American Association of Nurserymen.

ONE OF BURBANK'S BEST.

Sacramento, Cal., July 9, 1908.

George C. Roeding, Fresno, Cal.

My Dear Roeding: Since writing the letter inclosed, I have received your letter of the 8th. It so happened that the fruit came ahead of your letter.

I remarked that the plums you sent were smaller for the kind, much smaller indeed, than those sent us by Mr. Burbank two years ago to Portland, but you explain the reason why, and considering they were grown on one-year-old grafts, I think they show up very well. Those you sent reached me in perfect condition, as sound and perfect and firm as though just picked from the tree. I handed one to Mr. A. R. Sprague, who used to be prominently engaged in the fruit shipping business, and after tasting it he said he had never eaten a better plum, and grew quite enthusiastic in his comments. What little I know of the fruit, I am inclined to believe that Mr. Burbank's declaration that it is one of his best plums was well founded; and its early ripening qualities, coupled with its evident good shipping qualities, agreeable aroma and superior flavor, ought to make it a very attractive member of the plum family.

Yours very truly,

J. A. FILCHER,

Secretary State Agricultural Society.

QUALITY FINE, RICH, JUICY AND SWEET.

St. Louis, Mo., July 18, 1908.

Mr. George C. Roeding, Fresno, Cal.

Dear Sir: The box of Santa Rosa plums which you sent July 8th, reached me July 13th. One specimen had just started to decay, all the others were in perfect condition. I have kept a few of them on my desk until today, and they have just started to show indication of decaying. It seems to me that this is a good indication of its carrying qualities.

The quality is very fine, rich, juicy and sweet. It appears to me to be a valuable addition to our various plums and especially so if it proves to be hardy and prolific bearer in more trying localities than the place of its origin.

Yours truly,

H. C. IRISH,

Of the National Council of Horticulture.

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Fresno, California, United States of America

George C. Roeding, Pres't and Manager